

# *Pluchea tenuis* A.R.Bean (Asteraceae: *Plucheeinae*), a new species from Cape York Peninsula, Queensland

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## Summary

Bean, A.R. (2014). *Pluchea tenuis* A.R.Bean (Asteraceae: *Plucheeinae*), a new species from Cape York Peninsula, Queensland. *Austrobaileya* 9(2): 311–313. *Pluchea tenuis* A.R.Bean is newly described and illustrated. It is known from just one locality on Cape York Peninsula where it is associated with mound springs.

Key Words: Asteraceae, *Pluchea*, *Pluchea tenuis*, Queensland flora, taxonomy, new species, mound springs

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## Introduction

The genus *Pluchea* Cass. is distributed world-wide and has about 60 species. A revision of the Australian species was published by Hunger (1997). Since then, several additional species have been discovered, described and named (Bean 2011, 2013; Albrecht & Bean 2014). The species described here, *Pluchea tenuis* A.R.Bean, was first collected in 2008, and is currently known only from the type locality on Cape York Peninsula.

## Materials and methods

The species description is based on an examination of herbarium specimens at BRI. All measurements were made from dried material.

## Taxonomy

***Pluchea tenuis*** A.R.Bean **sp. nov.** affinis *P. rubelliflorae* (F.Muell.) B.L.Rob. sed absentia caulium alatorum, foliis teretibus, flosculis discoideis et femineis albis, flosculis discoideis 50–80 et achenis e flosculis exterioribus femineis solum exorientibus, differens. **Typus:** Queensland. COOK DISTRICT: Crosbie mound springs, 5 km south-west of Crosbie infrastructure, 5 September 2013, S. Thompson ST13469 (holo: BRI; iso: CANB, CNS, DNA, K, *distribuendi*).

Perennial shrub to 50 cm high. Stems scrambling to spreading, well-branched, glabrous throughout; not winged. Leaves sessile, linear, filiform, spreading, not decurrent, 15–38 × 0.5–0.7 mm, 30–50 times longer than broad, margins entire, apex acute; glabrous, glands absent. Capitula hemispherical, 5–6 × 9–10 mm, in loose terminal panicles; peduncles 13–42 mm long. Involucral bracts in several rows; outer bracts narrowly ovate, 2–3 × 0.4–0.6 mm, with apex acute, outer surface glabrous, margins entire and glabrous; median bracts lanceolate, 3.5–4.4 × 0.5–0.6 mm, apex attenuate, outer surface glabrous, margins glabrous; inner bracts linear, 4–4.2 × 0.3–0.4 mm, apex attenuate, outer surface glabrous, margins glabrous, entire. Receptacle epaleate, verrucose, glabrous, flat, 2.2–3.4 mm diameter. Marginal florets 80–120, female; corolla filiform throughout, 2.4–2.7 mm long, white; lobes 3, equal, triangular, 0.1–0.15 mm long, glabrous; style bifid, exserted, glabrous; pappus bristles 8–11, 2.2–2.5 mm long, caducous, in a single whorl, coherent at base, all of similar length; barbellate throughout. Disc florets 50–80, white, ovary fully developed but infertile; corolla cylindrical, 2.5–3.2 mm long, white; lobes 5, triangular, 0.4–0.5 mm long, glabrous; anthers c. 1.7 mm long, including tail c. 0.4 mm long; style undivided, with obtuse sweeping hairs extending below the furcation; pappus

bristles 6–9, 2.4–2.8 mm long, caducous, in a single whorl, coherent at base; barbellate throughout. Achenes developing only from outer florets; narrowly-ellipsoidal, 0.8–0.9 mm long, brown, with sparse appressed twin hairs; surface obscurely longitudinally ribbed; carpopodium prominent, white. **Fig. 1.**

**Additional specimen examined:** Queensland. COOK DISTRICT: Crosby Station, 1.6 km W of station homestead, Jul 2008, McDonald KRM7798 & Wannan (BRI, NSW).

**Distribution and habitat:** *Pluchea tenuis* is known only from the type locality, about 90 km SW of Musgrave, Cape York Peninsula. The habitat is a treeless area featuring numerous mound springs, where in places scattered plants of the *Pluchea* occur on grey sandy clay. Nearby, at the edge of the habitat, there are stands of *Melaleuca acacioides* F.Muell.

**Phenology:** Flowers and fruits are recorded from July and September.

**Affinities:** *Pluchea tenuis* is morphologically closest to *P. rubelliflora*, but it differs by the terete leaves 0.5–0.7 mm wide (versus flat leaves >2 mm wide), stems not winged (versus stems winged at least near the leaf bases), infertile achenes on the disc florets (versus all florets producing fertile achenes), the 50–80 disc florets (versus 5–30), the white florets (versus pink), and the achenes 0.8–0.9 mm long (versus 0.6–0.8 mm).

**Conservation status:** *Pluchea tenuis* is known from a population of “a few hundred plants” (S. Thompson, *pers. comm.* April 2014). It is confined to a specialised ‘mound spring’ habitat where water rich in Sodium salts prevails, and where very few plant species are able to survive. Applying the Red List criteria (IUCN 2001), a conservation status of **Vulnerable** is recommended (Criteria D1, D2).

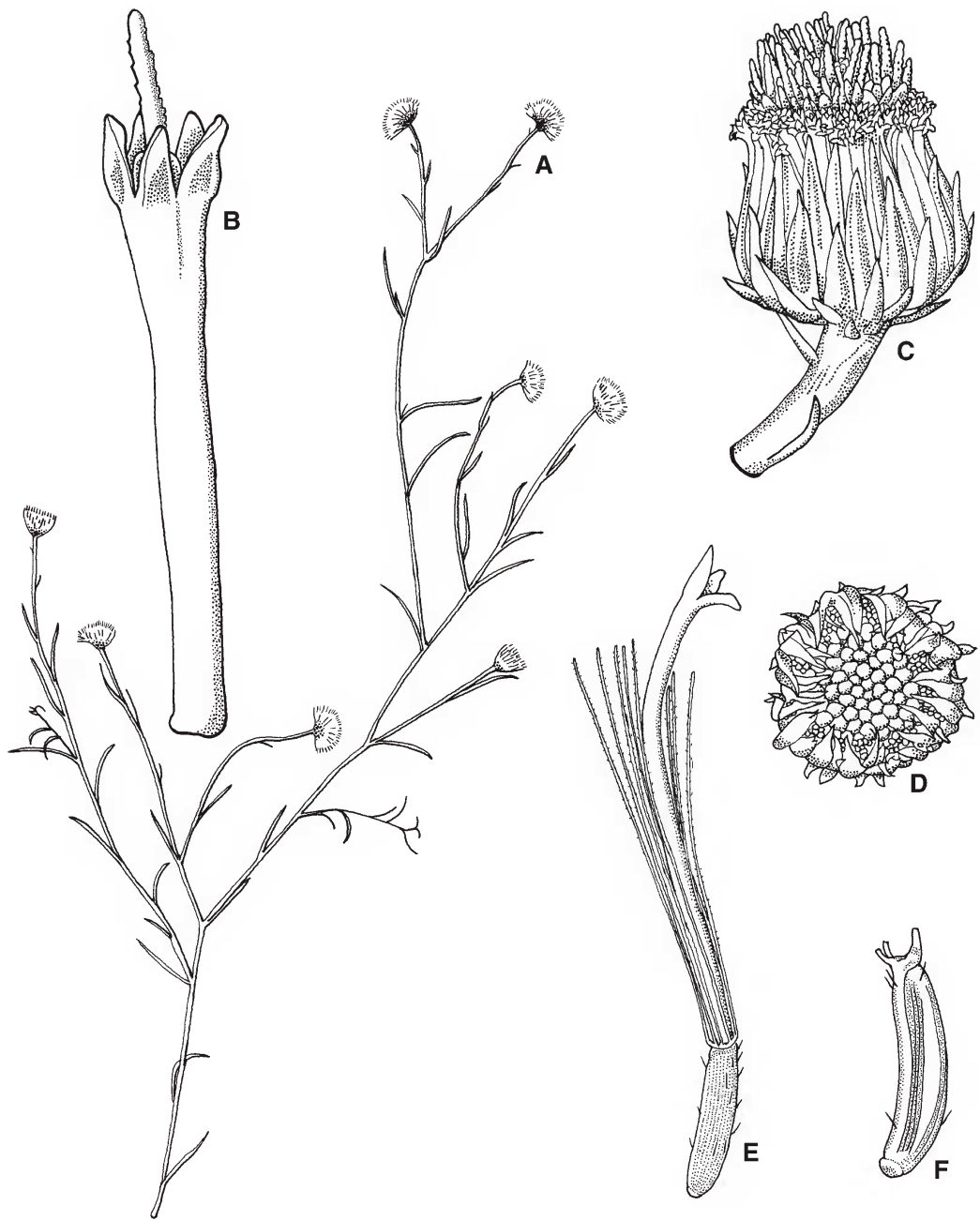
**Etymology:** From the Latin *tenuis* – slender or thin. This is in reference to leaves of this species, which are exceptionally narrow in comparison to the other Australian species.

## Acknowledgements

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## References

- ALBRECHT, D. & BEAN, A.R. (2014). A new herbaceous species of *Pluchea* (Asteraceae: Pluchinae) from central Australia. *Muelleria* 32: 3–7.
- BEAN, A.R. (2011). Two new species of *Pluchea* Cass. (Asteraceae: Pluchinae) from Queensland, Australia. *Austrobaileya* 8: 340–346.
- (2013). Three new species of *Pluchea* Cass. (Asteraceae: *Inuleae-Pluchinae*) from northern Australia. *Austrobaileya* 9: 66–74.
- HUNGER, S. (1997). A survey of the genus *Pluchea* (Compositae, Plucheeae) in Australia. *Willdenowia* 27: 207–223.
- IUCN (2001). *IUCN Red List of Categories and Criteria: Version 3.1*. IUCN Species Survival Commission: Gland (Switzerland)/Cambridge (United Kingdom).



**Fig. 1.** *Pluchea tenuis*. A. flowering branchlet  $\times 0.8$ . B. disc floret  $\times 24$ . C. flowering capitulum, lateral view  $\times 6$ . D. capitulum showing the numerous disc florets (corollas not yet opened) surrounded by the smaller marginal florets  $\times 6$ . E. marginal floret  $\times 24$ . F. achene  $\times 36$ . All from Thompson ST13469 (BRI).